



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Hirotsuna MIURA et al.

Group Art Unit: 3742

Application No.: 10/782,924

Examiner: S. HEINRICH

Filed: February 23, 2004

Docket No.: 118763

For: METHOD FOR FIXING FUNCTIONAL MATERIAL, APPARATUS FOR FIXING
FUNCTIONAL MATERIAL, DEVICE FABRICATION METHOD,
ELECTROOPTICAL DEVICE, AND ELECTRONIC EQUIPMENT

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants hereby request review of the July 21, 2008 Final Rejection in this application. A Notice of Appeal and fee in the amount of \$540 is filed concurrently herewith. The Commissioner is authorized to charge any additional fee or credit any overpayment associated with this communication to Deposit Account 15-0461. No amendments are being filed at this time. Claims 60-62, 66-72 and 75 are pending in this application. Claims 60-62 and 66-72 stand finally rejected and claim 75 stands withdrawn by the Examiner.

BASIS OF REQUEST

Applicants respectfully submit that the withdrawal of claim 75 from consideration, and the rejection of claims 60-62 and 66-72 under 35 U.S.C. §112, second paragraph, are based on clear error of fact, and that the rejection of claims 60-62 and 66-72 under 35 U.S.C. §103(a) is based on clear error of fact and clear error of law. Such factual and legal errors

permit the reversal of a Final Rejection during a Pre-Appeal Brief Conference (see July 12, 2005, Official Gazette).

BACKGROUND

The July 21, 2008 Final Rejection (1) withdraws claim 75 from consideration, (2) rejects claims 60-62 and 66-72 under 35 U.S.C. §112, second paragraph, and (3) rejects claims 60-62 and 66-72 under 35 U.S.C. §103(a) over the alleged Applicants' admitted prior art (AAPA) in view of U.S. Patent No. 6,531,191 to Notenboom, and further in view of EP 0930641 A2 to Kijuchi et al. (hereinafter "Kijuchi"), U.S. Patent No. 5,316,800 to Noakes et al. (hereinafter "Noakes"), and in view of U.S. Patent No. 3,710,072 to Shrader et al. (hereinafter "Shrader").

Applicants respectfully disagree with the above assertions.

CLEAR FACTUAL ERROR

With respect to the withdrawal of claim 75 from consideration, the Final Rejection alleges that claim 75 is directed to a non-elected invention. Applicants respectfully submit that the subject matter of pending claims 60-62, 66-72 and 75 are sufficiently related that a thorough search for the subject matter of claims 60-62, 66-72 would encompass a search for the subject matter of claim 75. For example, as acknowledged by the Final Rejection, claims 60-62 and 66-72 require irradiating a first and second droplet (i.e., plural droplets) that are disposed over a substrate. Similarly, claim 75 requires irradiating a plurality of first and second droplets that are discharged over a substrate. Thus, it is respectfully submitted that the search and examination of the pending claims could be made without serious burden. Accordingly, rejoinder and examination of claim 75 are respectfully requested.

With respect to the §112, second paragraph, the Final Rejection alleges that features of claims 60-62 and 66-72 are indefinite because these claims are unclear and not clearly described in the specification. Applicants respectfully submit that when read in light of the

specification, one having ordinary skill in the art would find the terms and scope of claims 60-62 and 66-72 clear and definite. For example, claims 60 and 71 both require disposing a first and second droplet, irradiating the first and second droplet by a first and second laser beam of a first semiconductor laser, respectively, and sintering the first and second droplets with a light. The original disclosure as originally filed fully supports these features, at least on page 4, lines 11-15, page 6, lines 3-7, page 25, line 9 - page 26, line 8, and in Fig. 7. Thus, for at least these above reasons, when read in light of the specification, one having ordinary skill in the art would find the terms and scopes of claims 60-62 and 66-72 clear and definite.

With respect to the §103(a) rejection of claims 60-62 and 66-72, the alleged AAPA, Kiguchi, Notenboom, Noakes and Shrader, all fail to disclose or render obvious disposing a first droplet of a first plurality of droplets over a substrate by a first inkjet head, irradiating the first droplet with a first laser beam by a first semiconductor laser, disposing a second droplet of the first plurality of droplets over the substrate by the first inkjet head, irradiating the second droplet with a second laser beam by the first semiconductor laser, disposing a third droplet of a second plurality of droplets over the substrate by a second inkjet head, and irradiating the third droplet with a third laser beam by a second semiconductor laser, as recited in independent claim 60, and as similarly recited in independent claim 71.

The Final Rejection alleges that (1) the alleged AAPA discloses that droplet deposition and laser treatment are well known in the art, (2) that Notenboom discloses a laser evaporation means, (3) that Kiguchi discloses first and second inkjet heads for depositing droplets, (4) that Noakes discloses depositing droplets in an interleaved fashion, and (5) that Shrader discloses a diffuse beam and a narrow beam. The Final Rejection also alleges that the claimed spacing of the first and second droplets would have been obvious to one having ordinary skill in the art. Applicants respectfully disagree with these assertions and submit

that the applied references, even in combination, fail to disclose or render obvious all of the features of at least claims 60 and 71.

For example, none of the applied references teaches or renders obvious a method of manufacturing a wiring substrate including disposing first and second droplets over a substrate by a first inkjet head, irradiating the first and second droplets by a first and second laser beam by a first semiconductor laser which is attached to the first inkjet head, disposing a third droplet over the substrate by a second inkjet head, and irradiating the third droplet by a second semiconductor laser which is attached to the second inkjet head, as recited in independent claim 60, as similarly recited in independent claim 71. That is, the combination of the alleged AAPA, Kiguchi, Notenboom, Noakes, and Shrader, fails to disclose or render obvious a method of manufacturing a wiring substrate by irradiating droplets over a substrates via first and second lasers, such that the first and second lasers are attached/integrated with first and second inkjet heads, respectively, and such that the first and second laser are semiconductor lasers as claimed.

Therefore, it is respectfully submitted that independent claims 60 and 71 are patentable over the combination of the alleged AAPA, Kiguchi, Notenboom, Noakes and Shrader. Further, it is respectfully submitted that claims 61, 62, 66-70 and 72, which respectively depend from independent claims 60 and 71, also are patentable at least in view of the patentability of independent claims 60 and 71, as well as for the additional features these claims recite. Accordingly, withdrawal of rejection is respectfully requested.

CLEAR LEGAL ERROR

The Final Rejection, on page 6, lines 12-16, alleges that it would have been obvious to one having ordinary skill in the art to modify the combination of applied references to have plural inkjet heads, as recited in claims 60 and 71, to speed production. Applicants respectfully disagree with this assertion.

Applicants respectfully submit that one having ordinary skill in the art would not have any reason to modify the combination of applied references to have the recited features of independent claims 60 and 71. For example, none of the applied references disclose semiconductor lasers. Moreover, having a system of multiple inkjet heads that each include a non-semiconductor laser would not be industrially advantageous because of the amount of space required for such a system. In addition, one having ordinary skill in the art would not have any reason to modify any of the applied references to use a first and second semiconductor laser that are respectively attached to inkjet heads as recited in independent claims 60 and 71. That is, the Final Rejection uses impermissible hindsight in the rejection of independent claims 60 and 71.

CONCLUSION

For at least the foregoing reasons, the withdrawal of claim 75, and the §112, second paragraph rejection, have been based on clear factual error, and the §103(a) rejection asserted has been based on clear factual error and clear legal error. Therefore, rejoinder of claim 75 and withdrawal of the rejections is respectfully requested.

Respectfully submitted,



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JAO:LXF/jth

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